



Commonwealth of Massachusetts
Executive Office of Energy & Environmental Affairs

Department of Environmental Protection

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December 18, 2012

Michael Robinson
Trelleborg Sealing Solutions
19 Brent Drive
Hudson, MA 01749

RE: Northborough
Transmittal No.: X252522
Application No.: CE-12-031
Class: *SM-25*
FMF No.: 447732
AIR QUALITY PLAN APPROVAL

Dear Ms. Robinson:

The Massachusetts Department of Environmental Protection ("MassDEP"), Bureau of Waste Prevention, has reviewed your Limited Plan Application ("Application") listed above. This Application concerns the proposed construction and operation of medical-related products manufacturing equipment at your silicone rubber processing facility located at 10 Forbes Road in Northborough, Massachusetts ("Facility").

This Application was submitted in accordance with 310 CMR 7.02 Plan Approval and Emission Limitations as contained in 310 CMR 7.00 "Air Pollution Control" regulations adopted by MassDEP pursuant to the authority granted by Massachusetts General Laws, Chapter 111, Section 142 A-J, Chapter 21C, Section 4 and 6, and Chapter 21E, Section 6. MassDEP's review of your Application has been limited to air pollution control regulation compliance and does not relieve you of the obligation to comply with any other regulatory requirements.

MassDEP has determined that the Application is administratively and technically complete and that the Application is in conformance with the Air Pollution Control regulations and current air pollution control engineering practice, and hereby grants this **Plan Approval** for said Application, as submitted, subject to the conditions listed below.

Please review the entire Plan Approval, as it stipulates the conditions with which the Facility owner/operator ("Permittee") must comply in order for the Facility to be operated in compliance with this Plan Approval.

1. DESCRIPTION OF FACILITY AND APPLICATION

The Permittee presently operates its Aerospace Division at 10A Forbes Road in Northborough, Massachusetts and its Life Science Division at 19 Brent Drive in Hudson, Massachusetts. Each division is operating under a Plan Approval issued by MassDEP. The Aerospace Division is operating under Plan Approval Transmittal #X228790 issued November 23, 2009. The Life Science Division is operating under Plan Approvals Transmittal #W041971 issued March 15, 2004 and X235418 issued November 22, 2010. Both divisions manufacture products from silicone rubber material which they process using various rubber mills, extruders, presses, and curing ovens.

The Permittee's Life Science Division is planning to relocate its operations from the Hudson facility to 10B Forbes Road in Northborough, Massachusetts. Since both divisions are legally owned by the Permittee, and the Life Science Division will be relocating to the adjacent suite of the Aerospace Division's building, the Life Science Division and Aerospace Division are considered one facility. Therefore, this Plan Approval Transmittal #X252522 is for the addition of the Life Science operations to the currently approved Aerospace Facility. **The above mentioned Plan Approvals #X228790, W041971, and X235418 will all be superseded by this Plan Approval #X252522.**

The Permittee will be relocating the Life Science Division manufacturing equipment from Hudson, Massachusetts to 10B Forbes Road, and will install new equipment to increase production capacity. The relocated and newly-installed equipment have the potential to emit Volatile Organic Compounds ("VOC") and Hazardous Air Pollutants ("HAPs"). The HAPs are also VOC.

Trace amounts of Volatile Organic Compounds ("VOC") are released from the silicone rubber as it is heated in the manufacturing equipment. VOC is also released from the use of solvents, primarily isopropyl alcohol cleaning solvent, with small amounts being released from product-marking inks. Best Available Control Technology ("BACT") for this application has been determined to be Best Management Practices ("BMP") which include minimizing the amount of solvent used for cleaning.

2. EMISSION UNIT (EU) IDENTIFICATION

Each Emission Unit (EU) identified in Table 1 is subject to and regulated by this Plan Approval:

Table 1			
EU#	Description	Design Capacity	Pollution Control Device (PCD)
1	Aerospace Silicone Rubber Processing	Not Applicable	None
2	Aerospace Ink and Solvent Usage	Not Applicable	None
3	Life Sciences Silicone Rubber Processing	Not Applicable	None
4	Life Sciences Ink and Solvent Usage	Not Applicable	None

Table 1 Key:

EU# = Emission Unit Number

PCD = Pollution Control Device

3. APPLICABLE REQUIREMENTS

A. OPERATIONAL, PRODUCTION and EMISSION LIMITS

The Permittee is subject to, and shall not exceed the Operational, Production, and Emission Limits as contained in Table 2:

Table 2			
EU#	Operational / Production Limit	Air Contaminant	Emission Limit
1	1. Silicone rubber throughput \leq 24,500 pounds per month and 196,000 pounds per year.	VOC	Not Applicable
2	2. Usage and Pound per Gallon Limits (Note 1)	VOC and HAPs (total)	Not Applicable
1 & 2 combined		VOC	0.5 tpm, 3 tpy (Note 3)
		HAPs (total)	0.125 tpm, 0.5 tpy
3	3. Silicone rubber throughput \leq 160,612 pounds per month and 803,060 pounds per year.	VOC	0.5 tpm, 2.7 tpy (Note 3)
4	4. Usage and Pound per Gallon Limits (Note 2)	VOC	1.4 tpm, 7.2 tpy

Table 2			
EU#	Operational / Production Limit	Air Contaminant	Emission Limit
3 & 4 combined		HAPs (total)	<1.0 tpm, <1.0 tpy
Facility-wide		VOC	2.4 tpm, 12.9 tpy
		HAPs (total)	<1.125 tpm, <1.5 tpy

Table 2 Notes:

1. EU #2 shall not exceed the limits contained in the following table:

Formulation	Usage Limit		Pounds per Gallon Limits	
	Monthly (gal)	Annual (gal)	Lbs VOC/gallon	Lbs HAPs/gallon
Naphtha	25	100	6.19	6.19
Methyl Ethyl Ketone	25	100	6.84	0
Isopropanol	100	500	6.56	0
Ink	25	50	6.00	6.00
Chemlok	25	100	5.865	5.52
Xylene	5	25	7.21	7.21
Methyl Isobutyl Ketone	5	25	6.67	6.67
Toluene	5	25	7.23	7.23

2. EU #4 shall not exceed the limits contained in the following table:

Product	Usage Limit		Pounds per Gallon Limits	
	Monthly (gal)	Annual (gal)	Lbs VOC/gallon	Lbs HAPs/gallon
Solvents	435	2,178	6.56	n/a
Inks	4.8	24	6.2	6.2

3. The Permittee shall track the total amount of silicone rubber processed on a monthly and annual basis and shall use an emission factor of 0.00668 pounds VOC per pound of rubber processed. This emission factor is taken from the United States Environmental Protection Agency AP-42 emission factors (draft Section 4.12, Rubber Products). Currently the only factor listed as measured is the value for emissions from platen presses, 0.00668 pounds per pound rubber. When final AP-42 factors or actual test data become available, then the new factors or data shall be used.

Table 2 Key:

EU# = Emission Unit Number

VOC = Volatile Organic Compounds

HAPs (total) = total Hazardous Air Pollutants.

tpm = tons per month

tpy = tons per consecutive 12-month period

gal = gallons

lbs = pounds

≤ = less than or equal to

< = less than

B. COMPLIANCE DEMONSTRATION

The Permittee is subject to, and shall comply with, the monitoring, testing, record keeping, and reporting requirements as contained in Tables 3, 4, and 5:

Table 3	
EU#	Monitoring and Testing Requirements
Facility-wide	1. The Permittee shall monitor all operations to ensure sufficient information is available to comply with 310 CMR 7.12 Source Registration.
	2. If and when MassDEP requires it, the Permittee shall conduct emission testing in accordance with USEPA Reference Test Methods and Regulation 310 CMR 7.13

Table 3 Key:

EU# = Emission Unit Number

Table 4	
EU#	Record Keeping Requirements
Facility-wide	1. The Permittee shall maintain adequate records on-site to demonstrate compliance with all operational, production, and emission limits contained in Table 2 above. Records shall also include the actual emissions of air contaminant(s) emitted for each calendar month and for each consecutive twelve-month period (current month plus prior eleven months). These records shall be compiled no later than the 15 th day following each month. An electronic version of the MassDEP approved record keeping form, in Microsoft Excel format, can be downloaded at http://www.mass.gov/dep/air/approvals/aqforms.htm#report .
	2. The Permittee shall maintain records of monitoring and testing as required by Table 3.
	3. The Permittee shall maintain a copy of this Plan Approval, underlying Application and the most up-to-date SOMP for the EU(s) approved herein on-site.
	4. The Permittee shall maintain a record of routine maintenance activities performed on the approved EU(s), PCD(s) and monitoring equipment. The records shall include, at a minimum, the type or a description of the maintenance performed and the date and time the work was completed.

Table 4	
EU#	Record Keeping Requirements
	5. The Permittee shall maintain a record of all malfunctions affecting air contaminant emission rates on the approved EU(s) and monitoring equipment. At a minimum, the records shall include: date and time the malfunction occurred; description of the malfunction; corrective actions taken; the date and time corrective actions were initiated and completed; and the date and time emission rates and monitoring equipment returned to compliant operation.
	6. The Permittee shall maintain records to ensure sufficient information is available to comply with 310 CMR 7.12 Source Registration.
	7. The Permittee shall maintain records required by this Plan Approval on-site for a minimum of five (5) years.
	8. The Permittee shall make records required by this Plan Approval available to MassDEP and USEPA personnel upon request.

Table 4 Key:

EU# = Emission Unit Number

PCD = Pollution Control Device

SOMP = Standard Operating and Maintenance Procedure

USEPA = United States Environmental Protection Agency

Table 5	
EU#	Reporting Requirements
Facility-wide	1. The Permittee shall submit to MassDEP all information required by this Plan Approval over the signature of a "Responsible Official" as defined in 310 CMR 7.00 and shall include the Certification statement as provided in 310 CMR 7.01(2)(c).
	2. The Permittee shall notify the Central Regional Office of MassDEP, BWP Permit Chief by telephone: 508-767-2845 , email: CERO.Air@massmail.state.ma.us or fax : 508-792-7621, as soon as possible, but no later than one (1) business day after discovery of an exceedance(s) of Table 2 requirements. A written report shall be submitted to Permit Chief at MassDEP within three (3) business days thereafter and shall include: identification of exceedance(s), duration of exceedance(s), reason for the exceedance(s), corrective actions taken, and action plan to prevent future exceedance(s).
	3. The Permittee shall report every three years to MassDEP, in accordance with 310 CMR 7.12, all information as required by the Source Registration/Emission Statement Form. The Permittee shall note therein any minor changes (under 310 CMR 7.02(2)(e), 7.03, 7.26, etc.), which did not require Plan Approval.

Table 5	
EU#	Reporting Requirements
	4. The Permittee shall provide a copy to MassDEP of any record required to be maintained by this Plan Approval within 30-days from MassDEP's request.
	5. The Permittee shall submit to MassDEP for approval a stack emission pretest protocol, at least 30 days prior to emission testing, for emission testing as defined in Table 3 Monitoring and Testing Requirements.
	6. The Permittee shall submit to MassDEP a final stack emission test results report, within 45 days after emission testing, for emission testing as defined in Table 3 Monitoring and Testing Requirements.

Table 5 Key:

EU# = Emission Unit Number

4. SPECIAL TERMS AND CONDITIONS

The Permittee is subject to, and shall comply with, the following special terms and conditions:

- A. The Permittee is subject to and shall comply with the Special Terms and Conditions as contained in Table 6:

Table 6	
EU#	Special Terms and Conditions
2 & 4	1. The Permittee shall utilize BMPs to minimize VOC emissions. BMPs shall include, but are not limited to, covering solvent containers when not in use, disposing of waste solvent in proper closed containers, and educating workers about the need to use cleaning solvents efficiently so as to minimize the generation of fugitive VOC emissions.

Table 6 Key:

EU# = Emission Unit Number

BMPs = Best Management Practices

VOC = Volatile Organic Compounds

- B. The Permittee shall install and use an exhaust stack, as required in Table 7, on each of the Emission Units that is consistent with good air pollution control engineering practice and that

discharges so as to not cause or contribute to a condition of air pollution. Each exhaust stack shall be configured to discharge the gases vertically and shall not be equipped with any part or device that restricts the vertical exhaust flow of the emitted gases, including but not limited to rain protection devices known as “shanty caps” and “egg beaters.”

- C. The Permittee shall install and utilize exhaust stacks with the following parameters, as contained in Table 7, for the Emission Units that are regulated by this Plan Approval:

Table 7				
EU#	Stack Height Above Ground (feet)	Stack Inside Exit Dimensions	Stack Gas Exit Velocity Range (feet per second)	Stack Gas Exit Temperature Range (°F)
#3 (Note 1)	31 feet minimum (10 feet over roof level)	As necessary to achieve minimum stack gas exit velocity	15-70	70-300

Table 7 Note 1: Emission Units #1, 2 & 4 emit to room air general exhaust. EU #3 includes multiple equipment with multiple exhaust stacks.

Table 7 Key:

EU# = Emission Unit Number

°F = Degree Fahrenheit

5. GENERAL CONDITIONS

The Permittee is subject to, and shall comply with, the following general conditions:

- A. Pursuant to 310 CMR 7.01, 7.02, 7.09 and 7.10, should any nuisance condition(s), including but not limited to smoke, dust, odor or noise, occur as the result of the operation of the Facility, then the Permittee shall immediately take appropriate steps including shutdown, if necessary, to abate said nuisance condition(s).
- B. If asbestos remediation/removal will occur as a result of the approved construction, reconstruction, or alteration of this Facility, the Permittee shall ensure that all removal/remediation of asbestos shall be done in accordance with 310 CMR 7.15 in its entirety and 310 CMR 4.00.
- C. If construction or demolition of an industrial, commercial or institutional building will occur as a result of the approved construction, reconstruction, or alteration of this Facility, the Permittee shall ensure that said construction or demolition shall be done in accordance with 310 CMR 7.09(2) and 310 CMR 4.00.

- D. Pursuant to 310 CMR 7.01(2)(b) and 7.02(7)(b), the Permittee shall allow MassDEP and / or USEPA personnel access to the Facility, buildings, and all pertinent records for the purpose of making inspections and surveys, collecting samples, obtaining data, and reviewing records.
- E. This Plan Approval does not negate the responsibility of the Permittee to comply with any other applicable Federal, State, or local regulations now or in the future.
- F. Should there be any differences between the Application and this Plan Approval, the Plan Approval shall govern.
- G. Pursuant to 310 CMR 7.02(3)(k), MassDEP may revoke this Plan Approval if the construction work is not commenced within two years from the date of issuance of this Plan Approval, or if the construction work is suspended for one year or more.
- H. This Plan Approval may be suspended, modified, or revoked by MassDEP if MassDEP determines that any condition or part of this Plan Approval is being violated.
- I. This Plan Approval may be modified or amended when in the opinion of MassDEP such is necessary or appropriate to clarify the Plan Approval conditions or after consideration of a written request by the Permittee to amend the Plan Approval conditions.
- J. The Permittee shall conduct emission testing, if requested by MassDEP, in accordance with USEPA Reference Test Methods and regulation 310 CMR 7.13. If required, a pretest protocol report shall be submitted to MassDEP at least 30 days prior to emission testing and the final test results report shall be submitted within 45 days after emission testing.
- K. Pursuant to 310 CMR 7.01(3) and 7.02(3)(f), the Permittee shall comply with all conditions contained in this Plan Approval. Should there be any differences between provisions contained in the General Conditions and provisions contained elsewhere in the Plan Approval, the latter shall govern.

6. MASSACHUSETTS ENVIRONMENTAL POLICY ACT

MassDEP has determined that the filing of an Environmental Notification Form (ENF) with the Secretary of Energy & Environmental Affairs, for air quality control purposes, was not required prior to this action by MassDEP. Notwithstanding this determination, the Massachusetts Environmental Policy Act (MEPA) and 301 CMR 11.00, Section 11.04, provide certain "Fail-Safe Provisions," which allow the Secretary to require the filing of an ENF and/or an Environmental Impact Report (EIR) at a later time.

7. APPEAL PROCESS

This Plan Approval is an action of MassDEP. If you are aggrieved by this action, you may request an adjudicatory hearing. A request for a hearing must be made in writing and postmarked within twenty-one (21) days of the date of issuance of this Plan Approval.

Under 310 CMR 1.01(6)(b), the request must state clearly and concisely the facts, which are the grounds for the request, and the relief sought. Additionally, the request must state why the Plan Approval is not consistent with applicable laws and regulations.

The hearing request along with a valid check payable to the Commonwealth of Massachusetts in the amount of one hundred dollars (\$100.00) must be mailed to:

Commonwealth of Massachusetts
Department of Environmental Protection
P.O. Box 4062
Boston, MA 02211

This request will be dismissed if the filing fee is not paid, unless the appellant is exempt or granted a waiver as described below. The filing fee is not required if the appellant is a city or town (or municipal agency), county, or district of the Commonwealth of Massachusetts, or a municipal housing authority.

MassDEP may waive the adjudicatory hearing-filing fee for a person who shows that paying the fee will create an undue financial hardship. A person seeking a waiver must file, together with the hearing request as provided above, an affidavit setting forth the facts believed to support the claim of undue financial hardship.

Enclosed is a stamped approved copy of the application submittal.

Should you have any questions concerning this Plan Approval, please contact Paul Dwiggins by telephone at 508-767-2760, or in writing at the letterhead address.

*This final document copy is being provided to you electronically by the
Department of Environmental Protection. A signed copy of this document
is on file at the DEP office listed on the letterhead.*

Roseanna E. Stanley
Acting Permit Chief
Bureau of Waste Prevention

Enclosure

ecc: Northborough Board of Health
Northborough Fire Department
MassDEP/Boston - Yi Tian

Lynn Sheridan, Capaccio Environmental